MASTER

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The book "A Century of London Weather" gives the monthly mean temperatures for the following stations:-

Greenwich 1841 to 1870
Kew 1871 to 1949

A 100 year uniform sequence can be obtained by weighting the 1850-1870 Greenwich values to make them comparable with the Kew sequence, using the Greenwich-Kew comparison given on page 59 of the above book.

The Kew records themselves are not strictly "standard" in that they are based on daily maximum and minimum values from midnight to midnight in a north wall screen, nearly 10 ft. above the ground.

The 100 year monthly averages of mean temperature are as follows:-

Jan.	39.4	Apr.	47.6	July	62.9	Oct.	50.3
Feb.	40.2	May	53.6	Aug.	61.9	Nov.	43.7
Mar.	42.6	June	59.5	Sept.	57.4	Dec.	40.4

Using these averages, the deviation from average for each of the 1200 months can be found by subtraction.

Deviations Above Average

Percentage of Positive Deviations

Month	(a) (all months)	(b) When previous month had positive deviation			
		Any value	1°F or more	2°F or more	3°F or more
(1)	(2)	(3)	(4)	(5)	(6)
January	56.5	65.5	65	73	76
February	55.5	65.5	69	71.5	60
March	48.0	63	65	69.5	65.5
April	48.5	57.5	62.5	63.5	73.5
May	50.5	56.5	63	56.5	55.5
June	53.0	64.5	77.5	85	89
July	47.0	56.5	60.5	65	60
August	48.0	58.5	57	56	65.5
September	46.5	62.5	68	84.5	79
October	57.5	62.5	59.5	55.5	71.5
November	52.0	50.5	56.5	58	60
December	51.0	57.0	60	52	25

With the exception of October and November and to a lesser degree, May and December, these figures suggest that there is more probability that a month will be above average in temperature if the previous month was above average. The frequency changed from about 5 times out of 10 (Col.2) to about 6 times out of 10 (Col.3). In certain months, January, June and September, the frequency rose still further to 7 or 8 times out of 10 after months which were well above average. (Cols.5 and 6).

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Deviations below average

Percentage of Negative Deviation

Month	(a) (all months)	(b) When previous month had negative deviation			
		Any value	1°F or above	2°F or above	3°F or above
(1)	(2)	(3)	(4)	(5)	(6)
January	43.5	53	56	65	53
February	44.5	56	59	58.5	62
March	52.0	71	72	70	78
April	51.5	59.5	62.5	52.5	72.5
May	49.5	55.5	48.5	52.5	45.5
June	47.0	58.5	57	52.5	59
July	53.0	64	62.5	76.5	75
August	52.0	61.5	66	81.5	86
September	53.5	68	72	73.5	89
October	42.5	46.5	50	50	57
November	48.0	46	45	42	50
December	49.0	55	51.5	45	53.5

October and November show no signs of persistence of below average temperature from the previous month, and the effects in December and May are quite small.

In the other eight months however, there are again signs that like months follow like. In particular, March, July, August and September were most likely to be cool or cold months, if the previous month had been below average.

Conclusion

A degree of persistence in monthly temperatures appears to exist except in autumn. It is strongest in late winter and late summer and weakest in late spring.

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